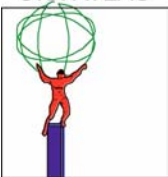
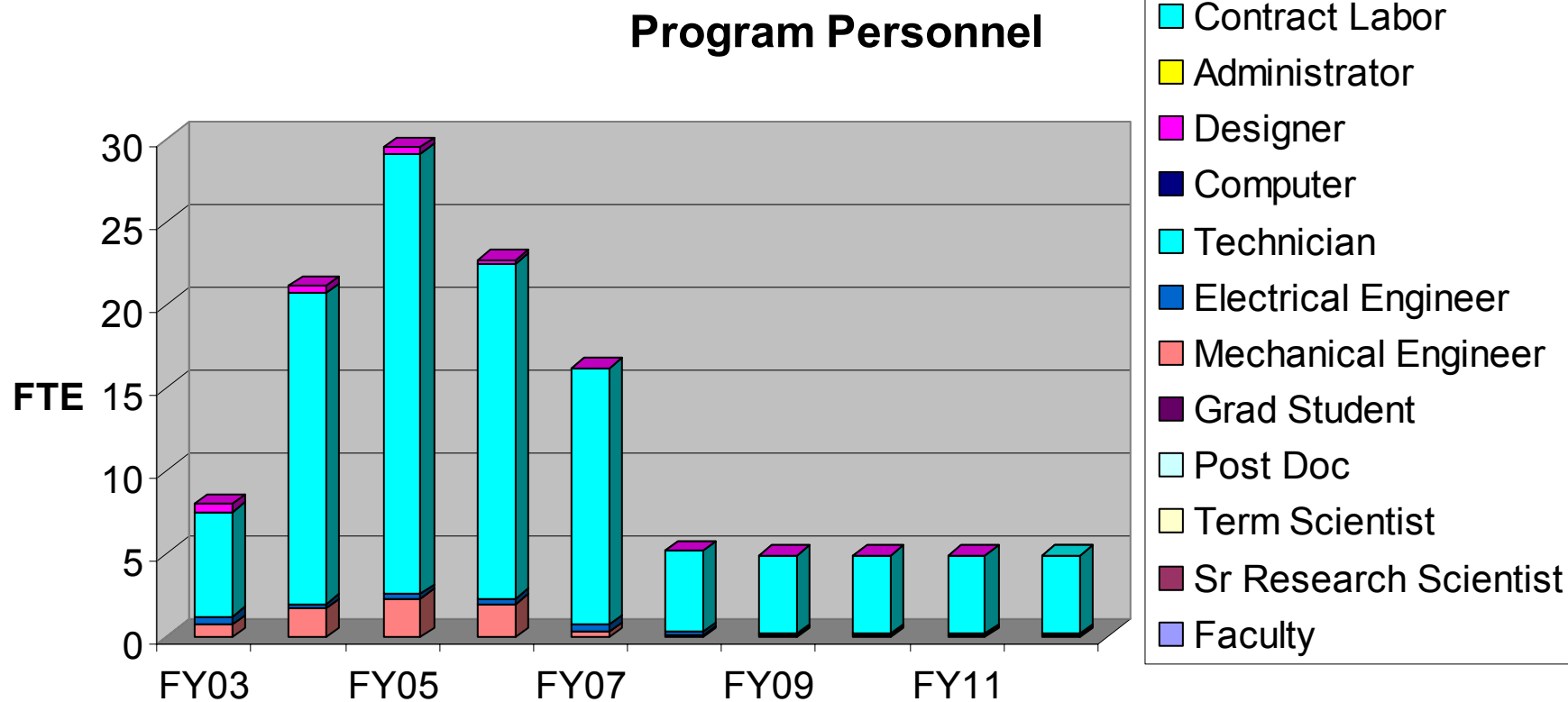


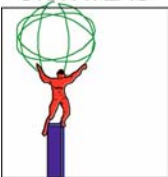
More on ATLAS Muon Personnel Resources

Frank Taylor
MIT

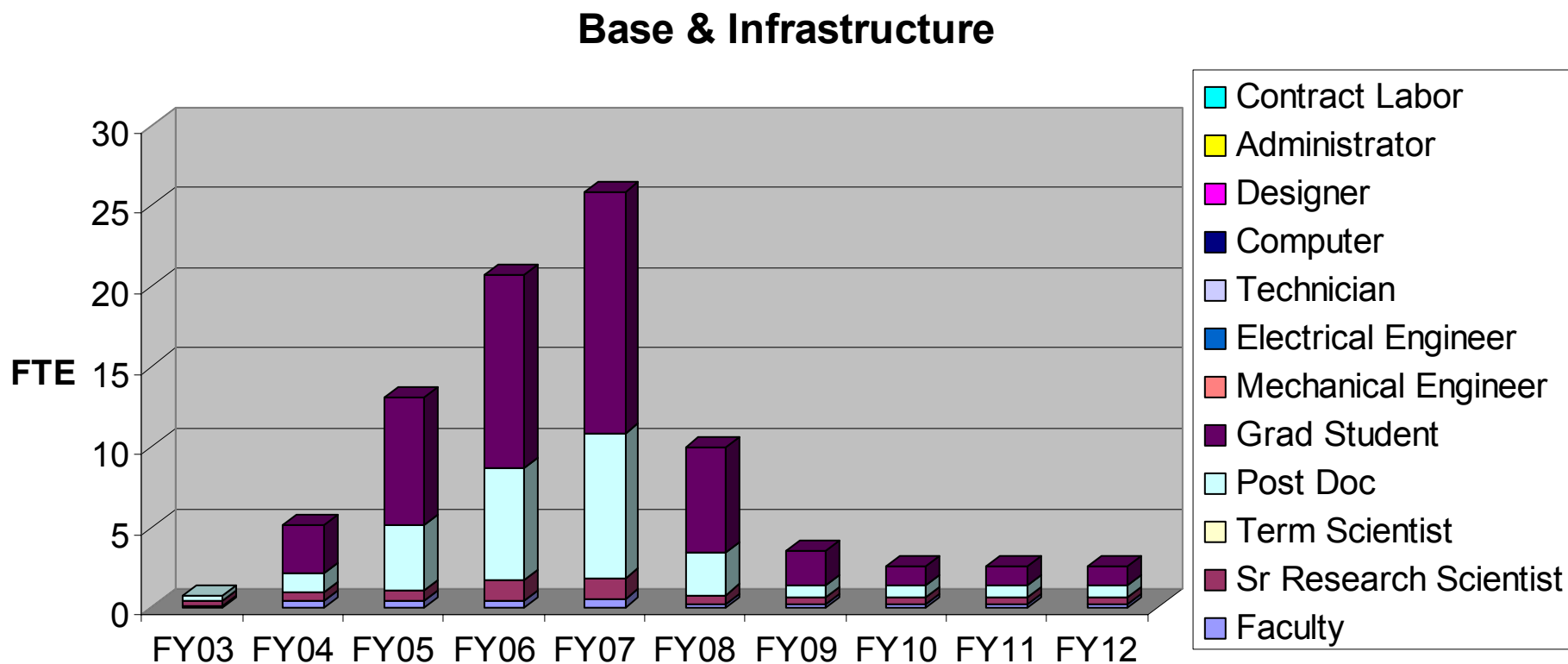


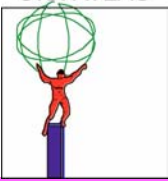
Program Labor Summary





Research Program Labor Summary





Personnel Resources

- **Phase I Pre-Operation**

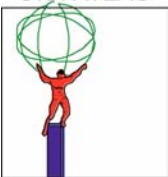
- ◆ **Work Areas will be several different locations @ CERN**
 - ▲ **Imperative to fix all problems before installation on structures**
 - ▲ **A lot of detailed work – some chambers will be shipped without complete services (~ ½ Michigan and Seattle MDT Chambers)**

- **Phase II Pre-Operation**

- ◆ **Work on 36 separate pieces of support structures**
- ◆ **Most work performed on scaffolding**

- **Phase III Pre-Operation**

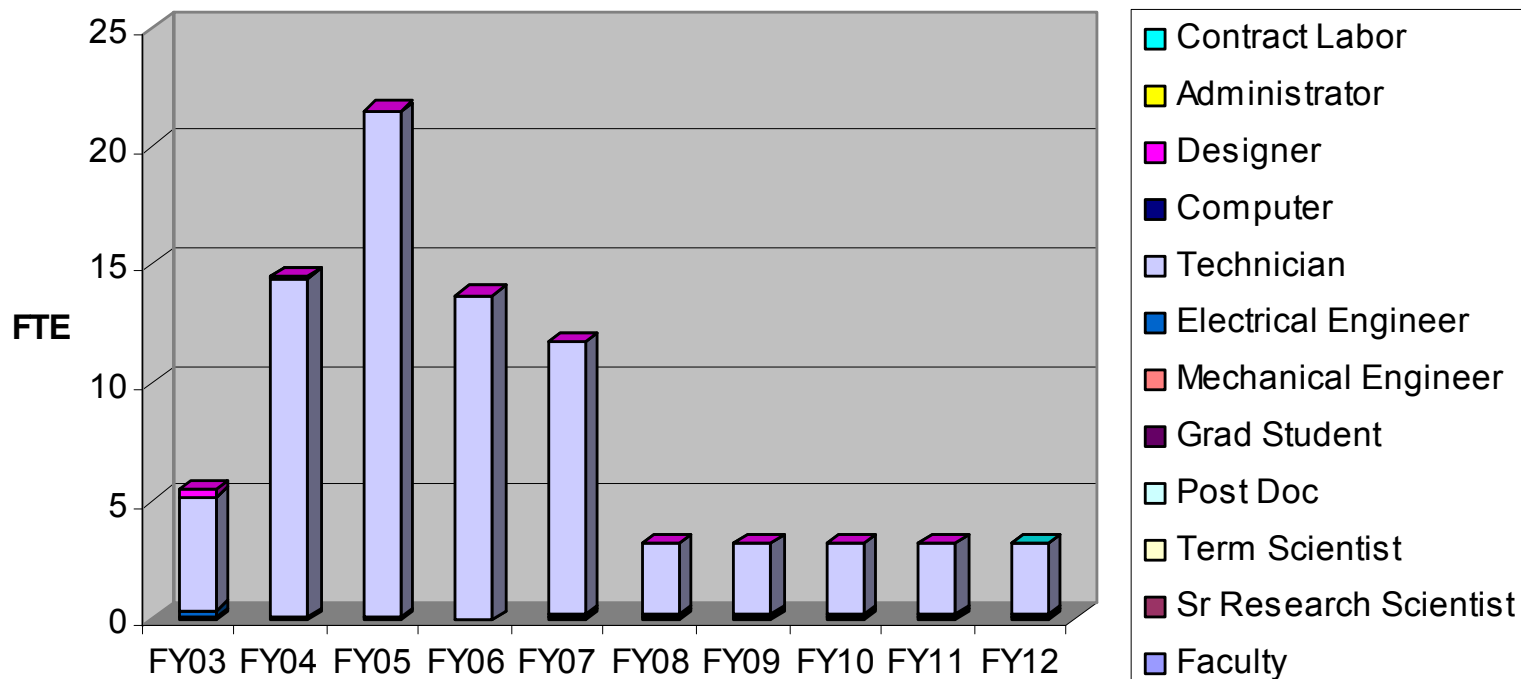
- ◆ **Preparations for support structure installations**
- ◆ **Work on 6 assembled structures 2 SW, 2 BW, 2 Shielding Disks – will be integrated with SWs**

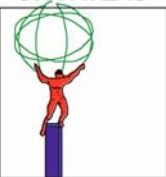


Research Program Labor Summary

3.5.1 MDT Mechanical & Electrical

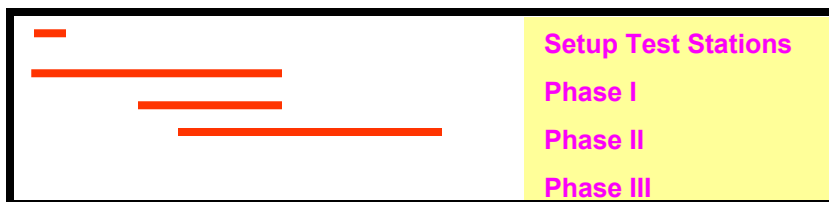
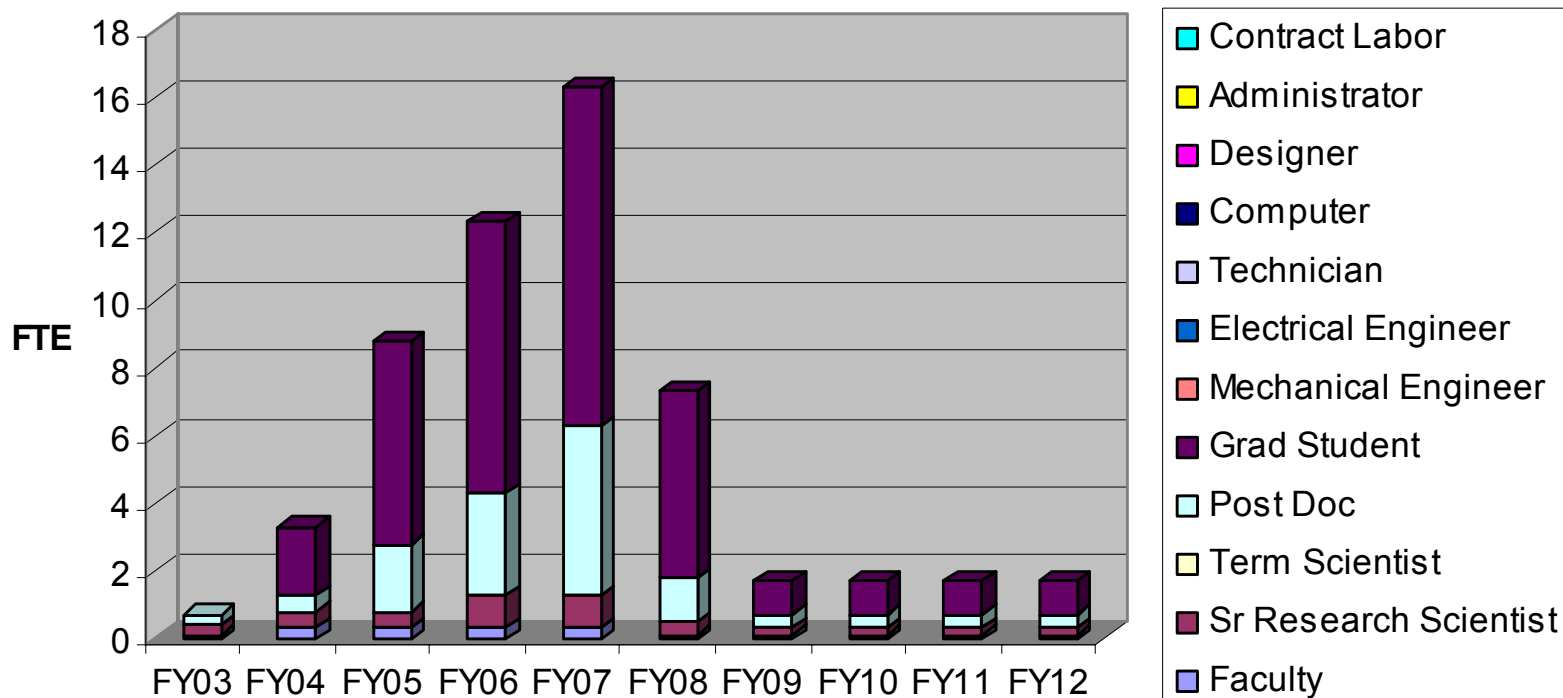
WBS 3.5.1 Program FTE

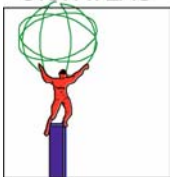




Research Program Labor Summary

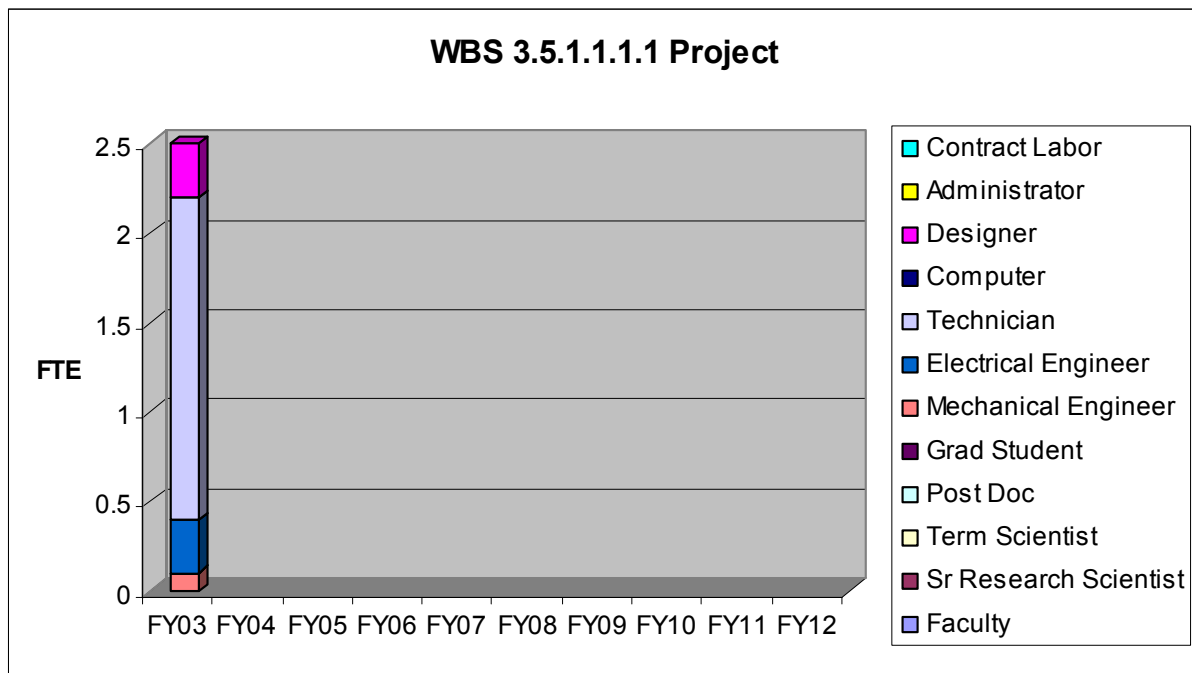
WBS 3.5.1 B&I FTE





Setup Work MDT Test Stations

- **Set up 2 MDT Test Stations:**
 - ◆ **Model ISR-3 and Hall 180 (2 places - assignments not final)**
 - ◆ **Work benches & tools, gas system & test equip., electronics readout, computer, chamber handling equip., etc.**

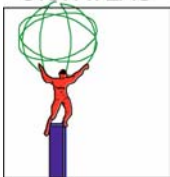


Duration: 0.5 yr

Ave. FTE: 5

FTE / Station: 2

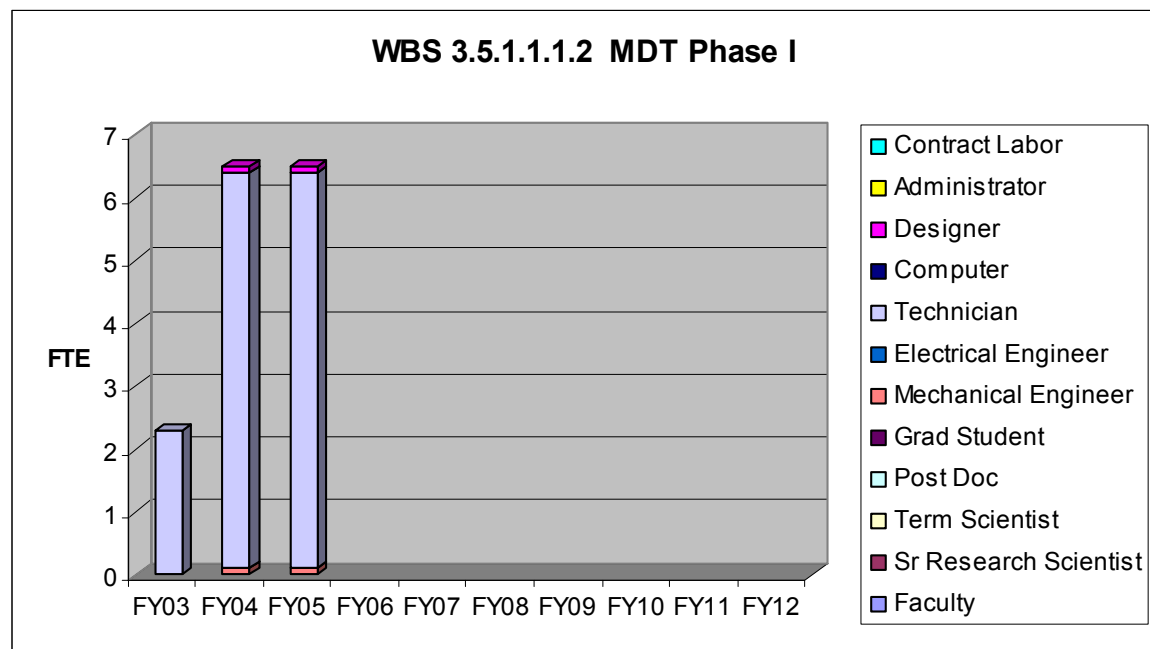
Supervisor: 1



MDT Phase I

• Pre-Operate 240 MDT Chambers at 2 Test Stations:

- ◆ Remove chamber from shipping box
- ◆ Test / Repair / Certify 120 MDT Chambers / Station
- ◆ Check leak tightness, purge gas, test dark current, mount missing electronics & hook up cables (Michigan & Seattle), test readout operation, mount B-sensors, check all sensors
- ◆ Store / Queue chamber for installation

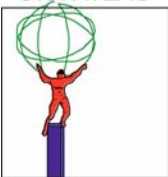


Duration: 2.5 yr

Ave. FTE: 5.5

FTE / Station: 3.1

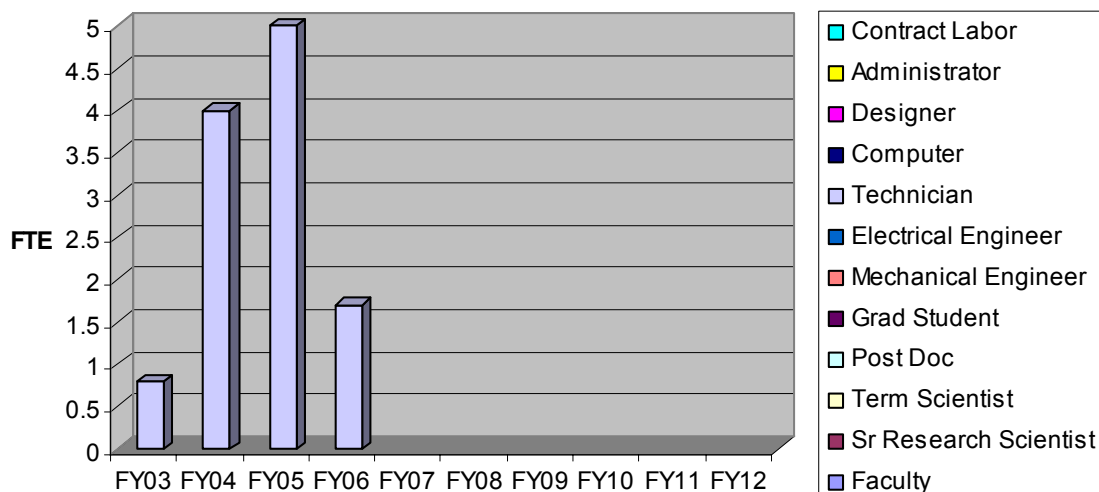
Days / chamber ~ 4.5



MDT Phase II

- **Pre-Operate 240 MDT Chambers on Support Structures:**
 - ◆ 2 Small Wheels – 32 MDT Chambers / Wheel in Hall 191 (not final)
 - ◆ 32 Big Wheel Sectors – 5 MDT Chambers / Sector in Hall 180 (not final)
 - ◆ 16 Large Chamber BW sectors & 16 Small Chamber BW sectors
 - ◆ 2 Shielding Disks – 8 EIL4 Chambers / disk in Hall 191 (not final)
 - ◆ Connect services, check leak tightness, purge gas, test dark current, test readout & sensors
 - ◆ Integrate alignment components with chambers and pre-operate

WBS 3.5.1.1.1.3 MDT Phase II

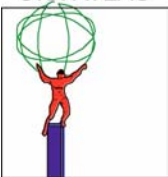


Duration: ~ 3 yr

Ave. FTE: ~ 4.4

2 Crews in FY04 - 05

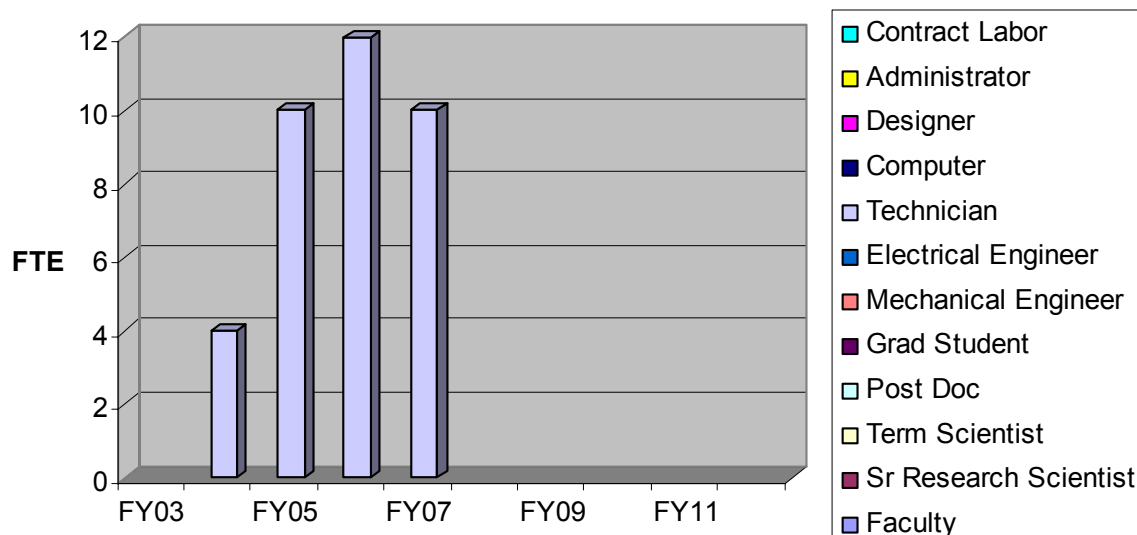
Days / chamber ~ 2.8



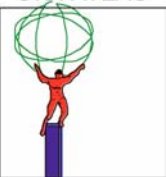
MDT Phase III

- Preparation for Wheel Installations – services, racks, etc. in cavern
- Pre-Operate 240 MDT Chambers on Support Structures in Cavern:
 - ◆ Preparation for Wheel Installations – cables, services, racks, etc. in cavern
 - ◆ 2 Small Wheels – 32 MDT Chambers / Wheel in Hall 191 (not final)
 - ◆ 2 Big Wheels – 80 MDT Chambers / Wheel
 - ◆ 2 Shielding Disks – 8 EIL4 Chambers / disks
 - ◆ Connect services, check leak tightness, test dark current, test readout & sensors

WBS 3.5.1.1.1.4 MDT Phase III



Duration: ~ 3.3 yr
Ave. FTE: ~ 11
4 Crews in FY 05 - 07
Months / Structure ~ 6
Cavern Efficiency ~ 0.5



MDT Phase IV

- Supported primarily by Base & Infrastructure Resources

